

## **SEATTLE PUBLIC UTILITIES**

### **ENVIRONMENTAL CHECKLIST**

#### **A. BACKGROUND**

- A1. Name of proposed project, if applicable:**  
Ballard Roadside Raingardens, Phase I
- A2. Name of applicant:**  
Seattle Public Utilities
- A3. Address and phone number of applicant and contact person:**  
Karen York, Project Manager  
Seattle Public Utilities  
Project Management Engineering Branch  
700 Fifth Avenue, Suite 4900  
PO Box 34018  
Seattle, WA 98124-4018  
(206) 684-5994
- A4. Date checklist prepared:**  
August 26, 2009
- A5. Agency requesting checklist:**  
Seattle Public Utilities
- A6. Proposed timing or schedule (including phasing, if applicable):**  
Construction is planned to begin in Spring 2010 and be completed by Winter 2010. Total construction schedule is proposed for approximately 10 months.
- This project is Phase 1 of what SPU proposes as a multi-phase project for constructing roadside raingardens in the Ballard combined sewer overflow (CSO) basin. This first phase is proposed for a smaller area as a pilot project to test out different designs and options before entering a larger project scale. The Phase 1 will also consist of flow monitoring. The future phase development will be informed by what is learned in Phase 1.
- Currently, there is no information on future phases beyond the project boundaries.
- A7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal?**  
Phase 2 will begin development in 2010.
- A8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**  
Cultural and Archaeological Resources Review by NWAA, August 2009.  
Geotechnical Report, SPU Materials Lab (in progress). Draft expected September 2009.
- A9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

No other applications are known to be pending at this time.

**A10. List any government approvals or permits that will be needed for your proposal, if known.**

- National Pollutant Discharge Elimination System (NPDES) Construction Permit – Washington Department of Ecology (Ecology).
- Street Use Permit – Seattle Department of Transportation (SDOT).
- NEPA implementation by use of the State Environmental Review Processes (SERPS) as part of the State Revolving Fund (SRF) Program.

**A11. Give brief, complete description of your proposal, including the proposed uses and the site of the project. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

*Project Background*

In the spring of 2010, SPU proposes to begin a natural drainage project in north Ballard to help reduce stormwater runoff and combined sewer overflows (CSOs) to nearby bodies of water. The project is part of city-wide efforts to comply with the Federal Clean Water Act and the State of Washington CSO laws and regulations requiring cities to reduce CSO volumes to the greatest extent possible by the earliest possible date.

The project will result in the reduction of impervious surface in the area by narrowing the roadways and replacing the roadway with vegetation. There are no steep slopes or environmental critical areas in the vicinity of the proposed project. The project is proposed to reduce stormwater runoff by vegetation uptake, evaporation, and soil retention, thereby reducing the volume of water delivered to the CSO system and the number of CSO overflow events in the Ship Canal.

*Project Description*

The Ballard Raingardens Phase I project will include the installation of bioretention cells and will be implemented within the area bounded by NW 85th and NW 65th Streets, and by 28th Ave NW and 32nd Ave NW. All the blocks in this area will be evaluated and the soils will be tested for permeability. Ten 300-foot neighborhood blocks will be selected based on criteria such as the ease with which the soils absorb and retain rainwater, the slope of the street and the site logistics. Soil tests began in mid-July 2009 and will be completed by the end of August 2009. The test holes will extend no more than 2 feet deep and excavation for the project are not expected to go any deeper.

Construction for the project will include widening the existing planting strips, adding curb bulbs, placing bioretention soil, and landscaping within shallow depressions between the curb and edge of sidewalk. Where curb bulbs are placed, the street will be narrower and therefore available parking spaces along the block would be reduced.

The Ballard combined sewer basin was chosen because the potential infiltration capacity of existing soils is rated medium to high. The Phase I boundary was chosen to utilize already existing monitoring stations to evaluate project performance and effectiveness. Using existing monitoring stations will help reduce project costs.

The following street sections within the project area are proposed to be reconfigured: 31st Ave NW (west boundary) to 29th Ave NW (east boundary) and NW 85th St (north boundary) to NW 75th St (south). Also 28th Ave NW from NW 65th St to NW 67th St (where NW 67th



enters from the east) and NW 70th St to NW 73rd St (where NW 73rd enters from the west).

- A12. Location of the proposal.** Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project area is in Seattle, Washington and is located between 31st Ave NW (west boundary) to 29th Ave NW (east boundary) and NW 85th St (north boundary) to NW 75th St (south). It also includes 28th Ave NW between NW 65th St and NW 67th St (where NW 67th enters from the east) and NW 70th St to NW 73rd St (where NW 73rd enters from the west). (See Figure 1 - vicinity map and location maps).

## **B. ENVIRONMENTAL ELEMENTS**

### **B1. Earth**

- a. General description of the site:**

☒ Flat ☒ Rolling ☐ Hilly ☐ Steep Slopes ☐ Mountains  
☐ Other:

- b. What is the steepest slope on the site (approximate percent slope)?**

Slopes on the site range from less than 1% to not more than 8%.

- c. What general types of soils are found on the site (for example, clay sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

The majority of the near-surface is underlain by Vashon till. The area of 28<sup>th</sup> Ave NW between NW 75<sup>th</sup> St and NW 72<sup>nd</sup> St is underlain by advanced outwash deposits (<http://geomapnw.ess.washington.edu/>).

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe:**

There is no surface indication or history of unstable soils in the vicinity.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

Soil disturbing activities (i.e., excavation, grading, and filling) will occur in the course of constructing the new storm water system and reconfiguring the streets. At this point in the design, the total quantity of graded soil is estimated not to exceed 500 cubic yards (cy) over the entire project. About 300 cy of bioretention material will be brought to the site. Although on-site native soils will be used where practicable, imported material will be needed, especially for the roadway base and for the asphalt roadway and concrete curbs and walkways. The source of this fill will be from a commercial aggregate producer, licensed and permitted by the State of Washington.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe:**

Yes, erosion could occur. However, the risk of erosion is very low because the project area is nearly flat. In addition, no filling will take place in water and best management practices (BMPs), as described in B(1)h below, will be utilized to protect all storm drain

inlets and minimize off-site drainage.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

This project is designed to reduce the amount of impervious surface. The impervious surface in the existing rights-of-way is approximately 65% impervious. When the project is complete, the impervious surface will be approximately 55% impervious. This represents a 10% reduction in the amount of impervious area.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**

The project will implement a Temporary Erosion and Sedimentation Control (TESC) Plan with BMPs appropriate to the site, conditions, and activities. Work practices will be monitored, maintained, and, if necessary, adjusted to meet changing conditions.

A Construction Storm Water Pollution Prevention Plan (SWPPP) will be developed as part of the Construction NPDES permit obtained from Ecology.

**B2. Air**

**a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

The Puget Sound Clean Air Agency (PSCAA) governs activities affecting air quality in King, Snohomish, Pierce, and Kitsap Counties; and thus has jurisdiction over the project area. As required by the PSCAA regulations, emissions would be controlled by using reasonably available control technologies (PSCAA, 2008) and City of Seattle construction practices.

Fugitive dust impacts associated with construction of the proposed project are not anticipated to be significant. Construction contractors would comply with regulatory requirements and implement appropriate dust control measures, as necessary. Measures to minimize fugitive dust emissions from construction would include:

- Spraying exposed soil and storage areas with water during dry periods.
- Covering exposed earthen stockpiles and loads of excavated material being transported from the site.

Vehicular emissions associated with construction of the project are anticipated to be short-term. Measures to minimize vehicular emissions would include:

- Requiring contractors to use best available control technologies.
- Proper vehicle maintenance.
- Minimizing vehicle and equipment idling.

The on-site generator set would comply with U.S. Environmental Protection Agency emission regulations under the provisions of 40 CFR 89, Nonroad Tier 2 emissions limits. Therefore, additional measures to reduce or control emissions would not be required.

On December 3, 2007, the Seattle City Council adopted Ordinance 122574 that requires City departments to evaluate greenhouse gas (GHG) emissions as part of environmental review under SEPA. The City of Seattle has developed a worksheet to estimate lifecycle GHG emissions for a range of standard development projects (See Attachment A – Greenhouse Gas Emissions Worksheet).



GHG emissions can be estimated in terms of carbon CO<sub>2</sub>e by fuel type and duration (or fuel economy) of equipment operations. CO<sub>2</sub>e is the term used to express the global warming potential of all greenhouse gases, as their equivalent in CO<sub>2</sub> emissions. Diesel emits approximately 26.55 lbs CO<sub>2</sub>e/gallon and gasoline emits approximately 24.3 lbs CO<sub>2</sub>e/gallon

#### Construction Emissions

This project would generate GHG emissions during the 10-month construction period through the operation of diesel- and gasoline-powered equipment and use of vehicles to transport materials, soil, and workers to and from the site.

Estimated *diesel* used by:

Concrete Mixer: 320 gallons

- Assume 2 days x 8 hours/day x 20 gallons/hour (345 HP engine)

Excavator: 2,400 gallons

- Assume 20 days x 6 hours/day x 20 gallons/hour (345 HP engine)

Roller/Asphalt: 1,800 gallons

- Assume 15 days x 6 hours/day x 20 gallons/hour (345 HP engine)

Dump Trucks: 120 gallons

- Assume 15 days x 40 miles RT at 5 mpg

Total (approximate) GHG emissions due to *diesel* use during construction:

$$4,640 \text{ gallons} \times 26.55 \text{ lbs CO}_2\text{e/gallon} = 123,192 \text{ lbs CO}_2\text{e}$$

Estimated *gasoline* used by:

Flatbed trucks: 20 gallons

- Assume 10 days x 2 trucks x 10-mile RT at 10 mpg

Pickup trucks or crew vans: 168 gallons

- Assume 168 days x 2 trucks x 10-mile RT at 20 mpg

Total (approximate) GHG emissions due to *gasoline* use during construction:

$$188 \text{ gallons} \times 24.3 \text{ lbs CO}_2\text{e/gallon} = 4,568 \text{ lbs CO}_2\text{e}$$

**Total (approximate) GHG emissions over construction period:**

$$123,192 + 4,568 = 127,760 \text{ lbs CO}_2\text{e}$$

#### Monitoring Emissions

This project would generate GHG emissions during the 8-month post-construction monitoring program through the operation of gasoline-powered vehicles to transport workers and equipment to and from the site.

Estimated *gasoline* used by:

Flatbed trucks: 40 gallons

- Assume 20 days x 2 trucks x 10-mile RT at 10 mpg

Pickup trucks or crew vans: 20 gallons

- Assume 20 days x 2 trucks x 10-mile RT at 20 mpg

**Total (approximate) GHG emissions due to *gasoline* use over 8-month monitoring period:**

$$60 \text{ gallons} \times 24.3 \text{ lbs CO}_2\text{e/gallon} = 1,458 \text{ lbs CO}_2\text{e}$$

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

There are no known off-site sources of emissions or odors that would affect this proposal.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

During construction, impacts to air quality would be reduced and controlled through implementation of standard federal, state, and local emission control criteria and Seattle construction practices. These could include: spraying areas of exposed soil with water for dust control (a BMP under the TESC Plan), regular street cleaning (in vicinity, if needed), and reducing exhaust emissions by minimizing vehicle and equipment idling.

### **B3. Water**

- a. Surface:**

- (1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river or water body it flows into.**

The nearest water body is Puget Sound located approximately 2,000 to 3,500 feet (0.3 to 0.6 miles) west of the project area. The Lake Washington Ship Canal is over a half mile south of the project area. Currently the stormwater is directed to the combined system and flows to the West Point Treatment Plant and the overflow during storms or especially high-flow periods goes to Salmon Bay. This is not expected to change as a result of the proposal.

- (2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe and attach available plans.**

This project proposes no work within the water, within 200 feet of the water, or over the water.

- (3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No fill or dredge material will be placed in or removed from surface water or wetlands.

- (4) Will the proposal require surface water withdrawals or diversions? If so, give general description, purpose, and approximate quantities if known.**

The proposal will not require surface water withdrawals or diversion. The proposal is estimated to decrease the amount of CSO by 14% by increasing infiltration. Surface flows also would be slightly reduced.

- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No. The project does not lie within the 100-year floodplain.

- (6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No. There will be no discharges of waste materials into surface waters.

**b. Ground:**

- (1) **Will ground water be withdrawn, or will water be discharged to ground water? If so, give general description, purpose, and approximate quantities if known.**  
No. The proposal will not require withdrawals from, or discharges to, groundwater.
- (2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, agricultural, etc.). Describe the general size of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**  
No waste material will be discharged into the ground.

**c. Water Runoff (including storm water):**

- (1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**  
The source of runoff during construction will be stormwater, which will be collected, and treated and flow to the West Point Treatment Plant; the overflow during storms or especially high-flow periods will continue to go to Salmon Bay.
- (2) **Could waste materials enter ground or surface waters? If so, generally describe.**  
During construction it is possible that erosion from the site could enter the surface waters, however as identified above, a TESC plan utilizing appropriate BMPs will be implemented to minimize this risk.

**d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:**

As identified above, during construction there will be a TESC plan in place. After construction, the raingardens would capture surface runoff which would be absorbed by the biorention soils and transpired by the plantings. The risk of discharge of waste materials to the creek due to an accident will be reduced by the addition of bioretention facilities. Unlike the current situation, the proposed natural drainage project would likely detain most or all of an accidental discharge of waste materials until clean up could occur.

**B4. Plants**

**a. Check types of vegetation found on the site:**

<input checked="" type="checkbox"/> Deciduous trees (check types): <input checked="" type="checkbox"/> alder <input checked="" type="checkbox"/> maple <input type="checkbox"/> aspen <input checked="" type="checkbox"/> other: various landscaping trees in planting strips
<input checked="" type="checkbox"/> Evergreen trees (check types): <input checked="" type="checkbox"/> fir <input checked="" type="checkbox"/> cedar <input checked="" type="checkbox"/> pine <input type="checkbox"/> other:
<input checked="" type="checkbox"/> Shrubs
<input checked="" type="checkbox"/> Grass
<input type="checkbox"/> Pasture
<input checked="" type="checkbox"/> Crop or grain: home gardens in planting strips
<input type="checkbox"/> Wet soil plants (check types): <input type="checkbox"/> cattail <input type="checkbox"/> buttercup <input type="checkbox"/> bullrush <input type="checkbox"/> skunk cabbage



<input type="checkbox"/> Other:
(NOTE: wet soil plants are located in ditches).
<input type="checkbox"/> Water plants (check types):
<input type="checkbox"/> water lily <input type="checkbox"/> eelgrass <input type="checkbox"/> milfoil <input type="checkbox"/> Other:
<input type="checkbox"/> Other types of vegetation:

**b. What kind and amount of vegetation will be removed or altered?**

The Ballard neighborhood is a residential area and many homes have gardens planted in the planting strips. There are a variety of mature trees in the project area. Many of the informally planted areas within the right-of-way will be removed and/or otherwise altered, although many key trees and shrubs will be left in place to the extent feasible. Vegetation that is removed will be replaced primarily with drought-tolerant, native species.

As an initial step in developing the project, a landscape architect from Seattle Department of Transportation (SDOT) conducted a general assessment of the existing vegetation in the right-of-way areas under consideration for construction of the raingardens (personal communication with Shane DeWald, SDOT). The assessment identified:

- Trees to be retained and protected (both in and adjacent to the right-of-way) based on their condition (good to excellent) and size (too large to be replaced or transplanted). The project intent is to avoid impacts to the area within the drip line of these trees.
- Trees to be removed and replaced based on their condition (fair to poor) and determination by the SDOT Sr. Landscape Architect that the benefits provided by a replacement tree of a more appropriate species for integration into a raingarden design, warrant removal and replacement. The project intent for trees in this category is to incorporate removal and replacement to maximize project compatibility and/or canopy cover.
- Trees to be relocated or replaced in kind based on their condition (good to excellent) and size (generally less than 4" in caliper which is comparable to the size of tree commonly transplanted or grown and sold by nurseries for new landscape installations). The project intent for trees in this category within areas proposed for raingardens is to salvage the trees for replanting in a manner compatible with the construction of raingardens and to maximize canopy cover as a project objective.

Additionally:

- For property frontages not yet planted and not suitable for raingardens, newly installed street trees funded by the SDOT Urban Forestry "Bridging the Gap" program may be offered to meet property owner interests and/or maximize canopy cover as an SDOT program objective
- For property frontages with understory plants in proposed raingarden areas (i.e., shrubs, groundcover, perennial and edible plants), the project will encourage property owners to salvage and replant on private property during the appropriate season prior to construction.

**c. List threatened or endangered species known to be on or near the site.**



According to review of the Washington Natural Heritage Program data (reviewed August 2009) for this area, no threatened or endangered plant species are known to occur on or near the site.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

The raingardens will be planted to create a highly developed landscape of native, drought-tolerant species in the right-of-way to provide a "green-belt" effect. Replacement landscape vegetation will consist largely of native, drought tolerant species. SPU will work with the SDOT landscape architect and residents to provide landscaping and vegetation as appropriate for the raingardens.

**B5. Animals**

**a. Checkmark any birds and animals that have been observed on or near the site or are known to be on or near the site:**

<b>Birds:</b>	<input type="checkbox"/> hawk	<input type="checkbox"/> heron	<input checked="" type="checkbox"/> eagle	<input checked="" type="checkbox"/> songbirds	<input type="checkbox"/> other:
<b>Mammals:</b>	<input type="checkbox"/> deer	<input type="checkbox"/> bear	<input type="checkbox"/> elk	<input type="checkbox"/> beaver	<input checked="" type="checkbox"/> other: rodents
<b>Fish:</b>	<input type="checkbox"/> bass	<input type="checkbox"/> salmon	<input type="checkbox"/> trout	<input type="checkbox"/> herring	<input type="checkbox"/> shellfish

**b. List any threatened or endangered species known to be on or near the site:**

SPU obtained a study of the potential impacts to threatened and endangered species and determined that the project will have "No Effect" on listed species (personal communication with Jim Muck, NOAA, August 2009).

**c. Is the site part of a migration route? If so, explain.**

The Washington Department of Fish & Wildlife Habitats and Species Map reviewed August 2009 does not show this site as being part of a migration route. However, Seattle is within the migratory route of many bird species.

**d. Proposed measures to preserve or enhance wildlife, if any:**

No measures are expected to be necessary.

**B6 Energy and Natural Resources**

**a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

The completed project will not require any supplementary energy to operate.

**b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

The project does not involve building structures or planting vegetation that would block access to the sun for adjacent properties.

**c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

Not applicable (see item a. above)

## **B7. Environmental Health**

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe:**

Small amounts of materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. Though unlikely at this location, contaminated soils, sediments, or groundwater could also be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, stormwater runoff, or vapors.

- (1) Describe special emergency services that might be required.**

Possible fire or medic services could be required during construction, and possibly during maintenance of the completed project.

- (2) Proposed measures to reduce or control environmental health hazards, if any:**

A Health and Safety plan will be submitted by the contractor before work commences.

### **b. Noise**

- (1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

Noises that exist in the area will not affect the project.

- (2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Noise levels in the vicinity of construction would temporarily increase during construction activities. Short-term noise from construction equipment will be limited to the allowable maximum levels of City of Seattle's Noise Control Ordinance (SMC Chapter 25.08).

Within the allowable maximum levels, SMC 25.08 permits noise from construction equipment between the hours of 7 am and 10 pm weekdays, and 9 am and 10 pm weekends and legal holidays; however, it is expected that the majority of construction will take place from 7 am to 6 pm on weekdays.

After completion of the project, occasional noise from equipment used for monitoring will occur during an approximate 12-month time period, but would be limited to 7 am to 10 pm weekdays and 9 am to 10 pm weekends.

While the standard quitting time for noisy construction under SMC 25.08 is 10 pm, recent changes establish an earlier quitting time (7 pm) for noisy construction work in the lowrise, midrise, highrise, and neighborhood commercial zones. In addition, except for emergencies, work will typically be scheduled for daylight hours.

- (3) Proposed measures to reduce or control noise impacts, if any:**

Construction equipment will be muffled in accordance with the applicable laws. SMC Chapter 25.08, which prescribes limits to noise and construction activities, will be fully enforced while the project is under construction.



## **B8. Land and Shoreline Use**

**a. What is the current use of the site and adjacent properties?**

The project will generally take place within the public right-of-way, which is currently developed as asphalt-paved residential streets with adjacent residential housing, which is almost exclusively single family.

**b. Has the site been used for agriculture? If so, describe.**

Not in recent history.

**c. Describe any structures on the site.**

Structures include residential housing on adjacent property and subsurface storm drain inlets and catchbasins within the street rights-of-way. There are also several civic structures such as community centers, museums and churches. In addition to structures, there are also light posts, hydrants, retaining walls, sidewalks and fences.

**d. Will any structures be demolished? If so, what?**

Some subsurface storm drain facilities will be upgraded. Utility poles, hydrants and other appurtenant structures will be moved or relocated as necessary for the project.

**e. What is the current zoning classification of the site?**

The project is in the public right-of-way. The area is characterized by multiple zoning designations that accommodate uses that include street rights-of-way, single- and multi-family residences, commercial activities, and park/open space. Specific zoning designations include: SF 5000, L2 (Residential Multi-Family Lowrise 2), and NC2-40 (Neighborhood Commercial).

**f. What is the current comprehensive plan designation of the site?**

Single-Family residential, Multi-Family Residential, and Commercial/Mixed use.

**g. If applicable, what is the current shoreline master program designation of the site?**

Not applicable. The proposal is not within the Shoreline zone.

**h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

No. No part of the project sites have been classified as "Environmentally Sensitive".

**i. Approximately how many people would reside or work in the completed project?**

No people will reside or work in the completed project.

**j. Approximately how many people would the completed project displace?**

No people will be displaced by the project.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

Not applicable (see item B(8)j above).

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The project will retrofit portions of street rights-of-way to provide bioretention and detention of stormwater runoff from the adjacent sidewalks and upstream right-of-way area, and a reduction of impervious area. This will be accomplished with the following elements of the project which are essential to reducing CSOs within the Ballard CSO

basin, but which will also contribute to the general appeal of this single family neighborhood:

- Retrofit areas of the street right-of-way by extending the curb into the existing roadway and installing bioretention facilities within that area and the adjacent planting strip to capture and allow for infiltration of stormwater flows,
- Removing some CSOs from the combined system.
- Plant a highly developed landscape of native, drought-tolerant species in the right-of-way to provide a "green-belt" effect.
- Reduce street width at bioretention locations to "calm" or slow local traffic.

#### **B9. Housing**

- Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**  
This project does not involve the construction of any housing units.
- Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**  
Not applicable (see B(9)a above).
- Describe proposed measures to reduce or control housing impacts, if any:**  
This project does not have any housing impacts.

#### **B10. Aesthetics**

- What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?**  
The tallest proposed structure will not exceed approximately 5 feet above the adjacent ground. This could be a rockery wall or earthen berm or wall.
- What views in the immediate vicinity would be altered or obstructed?**  
Construction of the structures identified above in B(10)a will not alter or obstruct views. As identified in Section B(8)l above, the project rights-of-way will be landscaped.
- Proposed measures to reduce or control aesthetic impacts, if any:**  
Other than the project elements identified in Section B(8)l and B(10)b above, there are no proposed measures to reduce or control aesthetic impacts planned for this project.

#### **B11. Light and Glare**

- What type of light or glare will the proposal produce? What time of day would it mainly occur?**  
The completed project will not produce any light or glare. Typically, construction will take place during the day. If an emergency situation calls for after-dark work, the contractor might use portable lights, which could produce glare.
- Could light or glare from the finished project be a safety hazard or interfere with views?**  
Street trees will be planted which will provide shade and screening in some locations.
- What existing off-site sources of light or glare may affect your proposal?**  
There is no off-site source of light or glare that will affect the project.
- Proposed measures to reduce or control light and glare impacts, if any:**  
There are no proposed measures to reduce or control light or glare, as the finished project



will not produce light and glare impacts. During construction, if an emergency requires after-dark work, the portable lighting may be adjusted as feasible to reduce glare impacts on adjacent residents.

## **B12. Recreation**

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

Loyal Heights Playfield and Salmon Bay Park are both located within the project area. Golden Gardens Park and the Ballard High School Playground are located nearby but outside the project area. Informal recreational opportunities currently include walking, jogging, and bike riding along the street and sidewalks.

**b. Would the proposed project displace any existing recreational uses? If so, describe.**

No recreational uses would be permanently displaced by the project. Informal recreational use would be temporarily displaced during construction, requiring users to be inconvenienced by equipment and other obstructions and/or to avoid those street sections during construction.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

Notification through the project newsletter and neighborhood meetings will provide advance notice to recreation users of temporary inconveniences. Over the long-term, the recreational experience will be improved by the safety and aesthetic amenities identified in Section B(8)l above.

## **B13. Historic and Cultural Preservation**

**a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

The project location was checked against the following registers by Northwest Archaeological Associates in August 2009:

- City of Seattle Landmarks
- Washington Heritage Register
- National Register of Historic Places
- King County and Local Landmarks List

No listed or known eligible historic resources are present on the project sites. There are 1 or 2 homes older than 50 years in the neighborhood with potential architectural interest but none of them are listed.

**b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

The cultural resources review found no recorded historic properties in or adjacent to the proposed project. Background research indicates the project is not an archaeologically sensitive area, and there is low potential for encountering pre-contact or historic period archaeological remains (Northwest Archaeological Associates, August 2009).

In addition, the project site consists almost entirely of area of built and disturbed environment and the depth of grading is not expected to impact into previously undisturbed areas.

**c. Proposed measures to reduce or control impacts, if any:**

Should evidence of cultural artifacts or human remains, either historic or prehistoric, be encountered during excavation, work in that immediate area will be suspended, and the find will be examined and documented by a professional archaeologist. Decisions regarding appropriate mitigation and further action will be made at that time.

SPU will follow requirements of DAHP in terms of proposed work within the vicinity of older homes with potential architectural interest in terms of avoiding potential impacts to stone walls located in front of these structures.

**B14. Transportation**

**a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

The proposal lies within the rights-of-way of the public streets. These streets provide access and connect with the major arterials of NW 65<sup>th</sup> St, NW 85<sup>th</sup> St, 28<sup>th</sup> Ave NW and 32<sup>nd</sup> Ave NW.

**b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

The area is served by public transit route #'s 15, 17, 28, 44, 46, 75, 81 and 994.

**c. How many parking spaces would the completed project have? How many would the project eliminate?**

When the project is completed, there will be approximately 5 fewer out of a current 24 on-street parking spaces within each 300-foot neighborhood block than exists now. The total lost parking spaces for the ten neighborhood block project will be approximately 50.

On-street parking will be temporarily displaced during construction, requiring residents and visitors, at times, to park up to one to two blocks from their destination. The displacement will be for approximately two weeks.

**d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

The existing street sections within the project area will be demolished and reconstructed. The current width of most standard streets in the area is 25 ft. The blocks with the proposed raingardens will have the street width reduced to a minimum of 12.5 ft. to accommodate one lane of vehicle traffic at a time.

Typically streets that have curb bulbs installed: In the mid block and parallel to each other would have the driving lane narrow to 13 feet for a 40 foot maximum distance; near the corner would have the driving lane narrow to 20 feet for a 40 foot maximum; and anywhere with a single curb bulb on one side of the street the driving lane would narrow to as 12.5 feet for a 40 foot maximum distance.

**e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The proposed project will not occur within the vicinity of any of these other methods of transportation.

**f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**



The number of vehicular trips and peak volumes are not expected to change as a result of this proposal. During the approximate 10-month construction period, weekday traffic to the area will temporarily increase by the number of construction crew members coming and going from the work site (exact numbers not known yet), and also there will be some hauling of materials by trucks, to and from the project site. Based on the estimated quantity of about 800 cy of material imported and exported to and from the site, respectively, it is estimated that there will be about 40 total truck loads (round trips) during the 10-month construction period.

**g. Proposed measures to reduce or control transportation impacts, if any:**

The contractor will be required to submit a traffic control plan for approval by the City, which will be in force during construction.

The on-street parking provided as part of the project design is appropriate for the movement of vehicles and pedestrians in this neighborhood and is consistent with the policies of SDOT and residential parking management. Neighborhood parking demand will be accommodated and none of the changes within the right-of-way is expected to result in unacceptable impacts.

**B15. Public Services**

**a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No. The completed project will have no impact on the need for public services.

**b. Proposed measures to reduce or control direct impacts on public services, if any.**

The completed street improvements will meet all City of Seattle requirements for emergency vehicle access. During construction, the contractor will be required to provide access at all times to emergency traffic, such as police, fire and disaster units.

**B16. Utilities**

**a. Check utilities currently available at the site, if any:** ☐ None  
☒ electricity ☒ natural gas ☒ water ☒ refuse service  
☒ telephone ☒ sanitary sewer ☐ septic system  
☐ other:

**b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.** ☒ None

Utilities will not change as a result of this project, except for the changes to the storm drainage system.

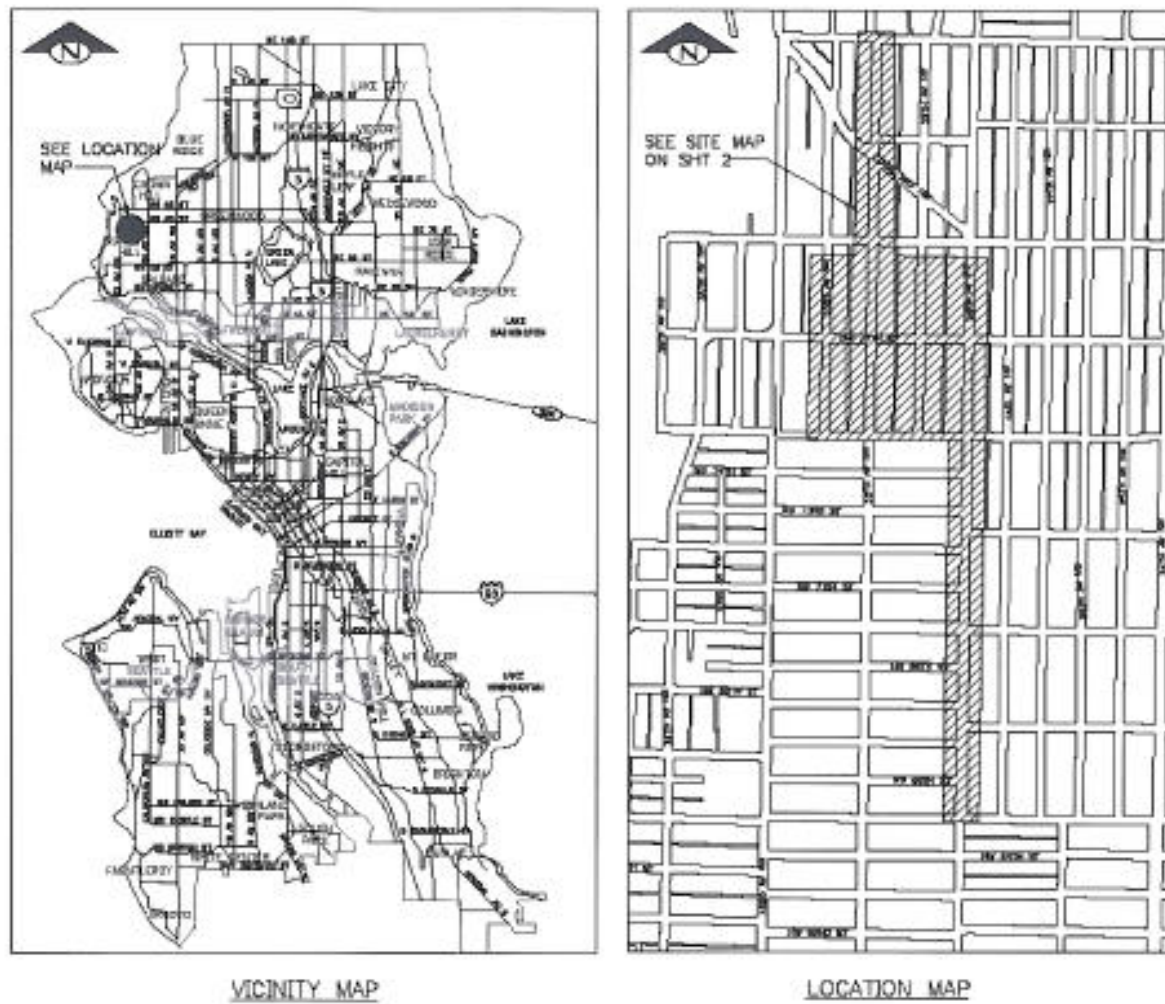
**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Karen York  
Karen York  
Project Manager

Date: August 27, 2009

Figure 1 – Vicinity and Location Maps





# Attachment A – Greenhouse Gas Emissions Worksheet

## Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions <b>Per Unit</b> or <b>Per Thousand Square Feet</b> (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
Single-Family Home.....	0		98	672	792	0
Multi-Family Unit in Large Building.....	0		33	357	766	0
Multi-Family Unit in Small Building.....	0		54	681	766	0
Mobile Home.....	0		41	475	709	0
Education .....		0.0	39	646	361	0
Food Sales .....		0.0	39	1,541	282	0
Food Service .....		0.0	39	1,994	561	0
Health Care Inpatient .....		0.0	39	1,938	582	0
Health Care Outpatient .....		0.0	39	737	571	0
Lodging .....		0.0	39	777	117	0
Retail (Other Than Mall).....		0.0	39	577	247	0
Office .....		0.0	39	723	588	0
Public Assembly .....		0.0	39	733	150	0
Public Order and Safety .....		0.0	39	899	374	0
Religious Worship .....		0.0	39	339	129	0
Service .....		0.0	39	599	266	0
Warehouse and Storage .....		0.0	39	352	181	0
Other .....		0.0	39	1,278	257	0
Vacant .....		0.0	39	162	47	0

## Section II: Pavement.....

Pavement.....		3.06				153
---------------	--	------	--	--	--	-----

Total pavement removal=840 SY

Total pavement patch install=340 SY

**Total Project  
Emissions:**

0

Construction & monitoring: see below and text in B (2)(c).....			0	0	0	0
---	--	--	---	---	---	---

Total (approximate) GHG  
emissions over 10-month  
construction period:  
123,192 + 4,568 =  
127,760 lbs CO2e

Total (approximate) GHG  
emissions over 8-month  
monitoring period:  
1,458 lbs CO2e